

CLAIMS

1. A method for treating drinking water comprising:
 - a) providing raw water to a process tank;
 - b) adding an ion-exchange resin to the process tank to form a raw water/ion-
 - 5 exchange resin mixture; and
 - c) removing treated water from the process tank through a membrane filter.
2. The method of claim 1 wherein the ion-exchange resin is a magnetic ion-exchange resin.
- 10 3. The method of claim 1 further comprising agitating the raw water/ion-exchange resin mixture sufficiently to maintain the ion-exchange resin in suspension.
4. The method of claim 1 further comprising separating the ion-exchange
- 15 resin from the raw water/ion-exchange resin mixture.
5. The method of claim 2 further comprising separating the ion-exchange resin from the raw water/ion-exchange resin mixture using a high gradient magnetic filter.
- 20 6. The method of claim 5 further comprising regenerating the ion-exchange resin.
7. The method of claim 6 further comprising providing the regenerated ion-exchange resin to the process tank.
- 25 8. The method of claim 6 wherein the regenerating step is performed in an external counter current column.
9. The method of claim 6 wherein the regenerating step is performed in the
- 30 process tank by adding a saline solution to the process tank.

